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Byrn Mawr and Swarthmore Colleges
Senior Thesis, Linguistics and Languages

Anna Dunder-Hester

Hungarian Vowel Harmony
Because the vowel system is so complex, I will also include here a feature analysis to help break down the above information:

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The Hungarian has an inventory of 14 vowels. Following precedent set by Robert Vago (1974), I will use native orthography throughout this paper for ease of interpreting data. The vowel system is as follows:

I. The Hungarian Vowels

II. The Hungarian Syllable System:

In this paper I will be discussing the Hungarian Vowel Harmony System. First, I will give a brief harmony in Hungarian and formalize these rules through Generalized Phonology and Optimality Theory. Explain the field research that I have done, after which I will make conclusions about the rules of discussion of the Hungarian Syllable system, then introduce the vowel harmony system.
3. The case system

... because they are great at demonstrating the wide range of suffixes available in Hungarian.

Having a single morphological function, the following examples are taken from Sipier and Tokenci (2000) because they are great at demonstrating the wide range of suffixes available in Hungarian.

A number of common suffixes belong to the case group, which I have included here because they are necessary for understanding Vowel Harmony. This list is derived from two sources, one of

...
but this is not the case.

We should expect that back and neutral vowels yield a back root (not that what neutral means?), but if a word root has both neutral and back vowels, and that is where real problems arise.

In Hungarian, when a word root has only back vowels, sometimes there are mixed vowel root words through, when a word root has both neutral and back vowels, and that is where real problems essentially make the words proper to listen to and easier to pronounce. Neutre, non-compound word back (within an individual word, Hungarian pride themselves on having a harmonic language because it is)

2. Outline of Backness Harmony

Tovey and Peter Sigler in their book entitled The Phonology of Hungarian.

Harmony, and present the case that is most satisfying and complete in my opinion, that of whole harmony, and therefore more controversial. I will do my best to present the basic arguments regarding backness in Hungarian is backness harmony, which is much more complicated than roundness harmony and research is also not going to involve roundness harmony. The second type of vowel harmony employed in Hungarian is backness harmony.

I. Vowel Harmony Types

Following are: 1) 2) a, 2) a/e 0, 3) e, 4) e 5) e, 6) 0, 7) 0, 8) 0. Note that some vowels sometimes have alveates and some do not. The vowel choices fall into the
word boundary is present in this case. Note also that a word with only neutral vowels acts as front.

Note that if a word has a prefix, this does not affect the harmony of the root. An internal vowel suffix. Note that if a word has a prefix, this does not affect the harmony of the root. An internal vowel suffix.

contains front harmonic vowels (ə, ə), it is considered a front-harmonic root and governs a front.

on whether the vowels in the root of the word make the root front harmonic or back harmonic. If a word

case clair in I; whereas in the case clair in 2, the vowel is chosen based on whether the vowels in the root of the word make the root front harmonic or back harmonic.

To demonstrate vowel harmony, I am going to provide a few simple examples. Notice in the

4. Simple Applications

-suffix vowel (Kenesi, Vago, Fenyvesi, 1998).

mixed vowel roots that contain e in the last syllable are the most unstable with respect to selecting a

evidence that is the least harmonic; there are no back harmonic neutral vowel roots that contain e.

because if sometimes alternate, and e is the least harmonic because it always alternates. As further

with either a or o, and e either has no alternate or alternates with e. So e is less harmonic than /o/ and

counterparts to these vowels, which makes /a/ the most harmonic. In suffixes, e always alternates

unrounded vowels /i/ and /e/ alternate harmonically, because there are no Hungarian back

when we examine mixed word roots later on, but the basic justifications are as follows. The high

neutral (ə). The motivators for classifying different degrees of neutrality will become more apparent

(ə). The mid front unrounded vowel is less neutral (ə), and the low front unrounded vowel is the least

and Siipola (2000) expanded upon, whereas high front unrounded vowels are considered the most neutral

There also seem to be degrees of neutrality, as Irgen and Kontra (1989) suggest and Tokunzy

There is also a major

"transparent", but later on there will be more discussion of the opaque instances, as they are a major

occurs when they are the last two vowels in a word root. I will continue to use neutral and not

plays in the harmonization, and that is when they are no longer transparent, but rather opaque. This

the harmonizing process. Sometimes when multiple neutral vowels occur in succession they do become

Neutral vowels are sometimes referred to as "transparent" vowels, because they appear to be invisible in

Neutral vowels are generally considered to be e, ə, and ə although there is debate over e.

3. Neutral Vowels
valization. But we have no cases thus far of two neutral vowels at the end of a root which govern only a 
closed form for governing a front vowel suffix, and other cases in which the stems are again 
apparently do not act fully neutral. There are some cases in which they seem to gain openable stems and 
known to cause problems, e.g., anadis-nekk, novemeber-nekk. In those roots, the vowels 
neutral vowel in the final vowel position, giving two neutral vowels in a row. These have long been 
the second category of roots has a neutral vowel in the penultimate vowel position and another 
and this is referred to as a disambiguating suffix. This only occurs when it is in the neutral vowel position. 
suffix, but either is fine. These are called valization endings. Some roots only take a front vowel suffix. 
If the neutral vowel is e or i, however, there are stems that govern either front or back vowels in the 
where, regardless of which neutral vowel is chosen, the only vowel that is chosen for the suffix is back. 
existing vowel in their penultimate vowel position and a neutral vowel in the last vowel position. Cases exist 
not the root must contain a back and neutral vowels.) First, we have a category of roots that have a back 
of mixed roots is categorized by the last two vowels in the stem. (Remember that to be a mixed 
A mixed root is categorized by the last two vowels in the stem. (Remember that to be a mixed 
different suffixes are chosen, I will now summarize their analyses of mixed root behavior. 
describe all the complex data in one concise chart, which gives us insight into the system of when 
which I will produce in an expanded version of shortly, I am in favor of this analysis because of its ability to 
Stippler (2000) have developed a model for laying out exactly the possible behaviors of mixed stems are, 
as I stated before, sometimes neutral vowels behave in an opaque manner. Tohkeny and 

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<th>Paradigm in the Tomato</th>
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are not front-harmonic. A group of exception words of this type will be addressed later.
harmonic. I post that this occurs because neutral vowels are technically front vowels, even though they
The finding that the suffix choice often arises from the lack of distinction between the suffix and the following word, with the example of Hungarian (sweetshirt) in the contrasting environments sweetshirt (with that sweetshirt). They used the example of Hungarian (sweetshirt) in the contrasting environments sweetshirt (with that sweetshirt).

They cite the work by Koterka, who suggested that the reallocation can occur within one speaker's grammar. Apparently, this reallocation is not always complete. Not necessarily all reallocation roots are reallocation for any individual, but there is evidence that some speakers have reallocation in their grammar.

As previously stated, some word roots govern both the root and the suffix endings, even for the same speaker. (Not necessarily all reallocation roots are reallocation for any individual, but there is evidence that some speakers have reallocation in their grammar.)

### 6. Vowelizing Suffixes

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<th>Neutral</th>
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<th>Neutral</th>
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<td>Pintz-rich</td>
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<td>River-nex</td>
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<td>Vowel chosen</td>
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### Complex Roots

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<td>Back-nex</td>
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### Simple Roots

<table>
<thead>
<tr>
<th>Root</th>
<th>Front</th>
<th>Vowel chosen</th>
<th>(Vowelizing Suffixes)</th>
<th>Neutral</th>
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<tbody>
<tr>
<td>Back</td>
<td>Vowel chosen</td>
<td>(Vowelizing Suffixes)</td>
<td>Neutral</td>
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</table>
the lexicon that those words govern back-vowel suffixes.

the Hungarian vowel inventory. Even though the vowel has disappeared, it is still honored by marking in

asserts that the cause of this oddity is a vowel that governed back harmony but has disappeared from

because there seems to be historical justification for doing so. Adrien Misri (personal communication)

set party because I am convinced of morphological influences being involved in vowel harmony and also

outcome. However, agree that some form of morphological marker does exist and explains this data

way of predicting when this abstract vowel should exist except for when we want it to explain this

justification for this conclusion. Many argue that this solution is too straightforward, because there is no

dedicated unsuitable by Phelps (1978), Jensen (1979) and Rhine (1979), saying that there is no

later a role of absolute neutralization converts the back root vowels to front vowels. This enables is

back vowel at the underlying representation which then correctly conditions back vowel harmony and

of Varga (1974), he suggests that the best way of accounting for this set of data is to apply an abstract

through the years, many attempts have been made to explain this, one of the most common being that

visiting at the water

keep at the picture

governing back vowels:

back vowel suffix

front-harmonic. However, there exists a set group of fifty-six words of this type, which only allow a

words take front-vowel suffixes as expected because neutral vowels are front vowels, even if they are not

In Hungarian there exist a large number of monosyllabic words with only a neutral vowel. These

7. Monosyllabic disambiguations

not purely a phonological process, but probably also heavily influenced by morphology.

rejected the dominant harmony of the context is revealing. This is strong evidence that vowel-harmony is
This experiment. The list of words contains ten control words, which contain only front or only back
minimal influence. No further consonant controls were enforced because it is simply out of the scope of
words do contain a mix of consonant clusters and single consonants, to try to keep consonants at a
consonants in the same positions. I did avoid use of because of semi-vowel complications. Also, the
consonants was made, although I did my best to keep them mixed and not to put the same types of
last syllable closed, and one syllabic word with the last syllable closed. No detailed control of the
last syllable open (no codas), one syllabic word with the last syllable open, one syllabic word with the
neutral (e, neutral) as the words were developed. The four words included one syllabic word with the
types of penultimate and final vowel combinations (back, back, e, back, e, neutral, e, neutral) and
The words were chosen to follow a specific pattern of vowel sequences: For each of the eight
each word three times to test whether or not they chose the same (front vs. back) suffix each time.
In addition to the 42 new words on the survey, each repeated 3 times
best-sounding suffix for each new word. These were chosen because they have different alternate vowels. The subject saw
with different cases each time. The 3 cases chosen were dale (e), -beck (elk), and
Hungarian, following Hungarian word structure and alphabet. The subjects were asked to choose the
Hungarian, and K.J. David Harisson. The survey (see Appendix A) consisted of a list of invented new words in
students in Budapest and Miskolc. I developed the survey according to procedures set by Catherine
To test my hypotheses, I devised a survey to distribute to forty university-aged Hungarian

2. Process

different approach.

our current understanding of the syllabion process and challenge our knowledge and encourage a
conclusions. My hypothesis is that my data will follow the rules of the chart. My data will either support
work is structured around their rules of mixed-vowel sounds because I am interested in testing their
research is a continuation of the above mentioned conclusions of TÓTH and (1987). My

I. Introduction and Hypotheses

III. Empirical Research
Change the quality of the vowel but rather use two time units. Secondly, there is no evidence of
the feature long being included in this chart but needs some clarification. First of all, it does not

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Phonetic

Orthography

Harmonize, so I am repeating the feature system here.

necessory to examine the features of vowels to correctly determine the process in which vowels
is thought I first want to add a little more detail to our knowledge of the Hungarian vowel system. It is
making further conclusions about the nature of vowel harmony in Hungarian before I continue.

accomplished I will present a loose interpretation of the results of my empirical study and finish by
way we will be able to examine the harmony from two different perspectives. When this has been
framework of Optimality Theory to present the constraints that exist in Hungarian vowel harmony. This
The next step in my analysis of will be to construct a generative model, and then I will use the

ITM More on vowels

Hungarian-like; authentic without being authentic;
no words that are very similar to any Hungarian words, including slang. The words were judged to be
The words have all been verified by two native speakers to include no real Hungarian words and
vowels. These were included to make sure the subjects understood their task. The version of the survey
with the instructions in English is attached.
to feature changing. As stated above, when no look a suffix, the vow al in \(-nak\)/neck was specified for

\[ (q^+) \quad p + q + \]

\[ \text{Knyag well} \]

\[ (q^-) \quad p- \]

\[ \text{ng + neck} \]

backness. The same works when the root has only [\(+\) back] features, as in \text{Knyag} (dog).

(\text{woman}) when we use the suffix -\text{nak/\text{\text{-}}} which specifies -\text{long}, \text{high}, +\text{low}, but nothing for

(\text{parentheses indicate no backness specification at underlying representation). The same will occur for nd}

\[ (q^-) \quad q- \]

\[ \text{Gyumphoks + ben} \]

\text{suffix.}

\text{high}, and +\text{low}, but has no specification for backness until this spreads from the root word to the

\text{harmonic vowels, and should take a front vowel as its suffix. The suffix -\text{jan/\text{\text{-}}} is specified

and then when a word has only back harmonic vowels. For instance, \text{Gyumphoks (fruit) has two front

Harmony. First, I will start with the simple cases; in which the word root has only front harmonic vowels,

Here I will show the process of determining which the rules are that govern Hungarian vowel

V. \text{Generative Phonology}

back vowels are round except ə, knowing that harmonic vowel systems prefer symmetry.

may say all harmonic vowels are round, especially considering the unbalanced back vowels, meaning all

harmonic vowels are [+round]. These may be modified to decrease a underlying [+round] so that we

except for ə. All front harmonic vowels are [+round] and [-low]. Apparently, with the exception of ə all

[\text{back} and [-round]. All of the back vowels are [+round] except ə and all front vowels are [-low]

looking at this chart, some patterns appear. First, all of the vowels we have been calling neutral are

is the only contrasting feature between some vowels.
unrounded front vowels (neutral vowels) underexposed for backness at their underlying representation.

Suffix choice will be chosen because the wrong vowel will spread, giving justification for leaving

This demonstrates that if we specify the neutral vowel in the underlying representation, the incorrect

$$ (q+) \begin{array}{c} q^+ \\ \text{doll + bán} \end{array} $$

$$ (q-) \begin{array}{c} q^- \\ \text{lyeŋ + bán} \end{array} $$

backness specification.

every example has the neutral vowel specified [-back] and the second example has the neutral vowel without a

Now let's try a mixed root, one that has both back and neutral vowels, say doll (Pen). Again, the first

$$ (q-) \begin{array}{c} q^- \\ \text{lyeŋ + bán} \end{array} $$

underlying level, because it appears to govern the correct suffix alternation, a front vowel, either way:

underlying level, but also a front vowel. The question arises of whether or not to specify the e at the

second is neutral, but also a front vowel. The word is lyeŋ (boote); the first vowel is front harmonic and the

front harmonic and neutral vowels. The word is lyeŋ (boote); the first vowel is front harmonic and the

Now some examples with neutral vowels. First a front harmonic word root, meaning 'only contains

underexposed for backness. Suffixes and case roots are two lexically independent entities, and that the case suffixes are

suffixes do not phonetically match the case root in reflex (on me). Therefore, I conclude that the case

böl/bo suffix is not positively related to böšTEM (from in me), and more convincingly, the -en/on/on

points out, the argument quickly falls apart. Although the suffix -röd/-röd is related to ötem (at me), the

* Nekam is unacceptable. This at first seems to be sufficient justification, however, as Reiss (2002)

modulation for this is a case when the suffix form of -nak/nek acts as a word root, as in nekam (for me).

hemorrhage process? Some do consider -nek to be the underlying form of the -nak/nek suffix. The

nak/nek start out with a specification for backness and then have its backness feature changed by the

where the front harmonic vowel spreads is back specification to -n/-k, leaving it -nek. Why didn't

-long, -high, and -low, but had no specification for backness. This creates a feature-filling environment,
Next, I will introduce some more complicated data. The disharmonic suffix group can be

5. Becomes -round.

4. All vowels not specified for roundness default to -round:

roundness specification.

3. Backness spreads from the right-most specified vowel in the word root to vowels that have no

roundness specification. This will prevent spreading onto neutral vowels in the word root.

2. Any underspecified root vowels will default to [-back].

1. Backness spreads from the right-most specified +round vowel in the word root to vowels that have no

roundness specification. The generalizations of grammar that we have so far are:

3. Suffixes for which there is an alternating vowel have no backness or roundness specification.

2. -Round vowels have no backness specification.

1. e is underfingly +round.

Through this point, we can assume the following about the underlying representations of Hungarian:

\[
\begin{align*}
(q-) & \rightarrow q^+ \\
\text{soft} & + \text{neck} \\
\text{back} & + \text{neck}
\end{align*}
\]

harmmonic vowel is the one whose features spread.

do not lose their harmmonic-governing powers when in a word with back vowels, and that the right-most

and soft (bureau, churlish) and are diagrammed below. This demonstrates that front round vowels

was found to govern a front vowel suffix for ninety-eight percent of the subjects. The words are bind

whereas a word root in which the first vowel is back harmmonic and the second vowel is front harmmonic

vowel is back harmmonic were found to govern a back vowel suffix one hundred percent of the time.

choice. In one study she found that word roots in which the first vowel is front harmmonic and the second

Ringgen shows that for disharmonic loan words, the right-most harmmonic vowel governs the suffix vowel

\[
\begin{align*}
(q+) & \rightarrow q^+ \\
\text{illustrious} & + \text{neck} \\
\text{active} & + \text{neck} \\
\text{denotes} & + \text{neck}
\end{align*}
\]

gives my analysis further evidence that the neutral vowels should be let underspecified.

which Ringgen (1989) found that one hundred percent of those surveyed chose a [+back] suffix, which

The next examples are loan words: denilek, aktive, and illustrious, (denilek, active, and illustrious), for
situations. To solve this, I suggest adding a rule about feature spreading in our grammar that states:

Prevent the spreading of the [+back] feature. This is what is required to account for neutral vowels.

However, these are both ungrammatical. Apparently, the two non-neutral vowel positions have

\[
\begin{align*}
(q^+) \quad ( \quad ) q^+ \\
\text{november + neck} \\
\end{align*}
\]

This is expected.

The following is to be expected.

November both have one back vowel and then two neutral vowels, based on what we have seen so far.

Next, let's start by looking at some examples. The words oxygen and number have.

As yet we have not approached the words with two neutral vowels in the last two positions. But that.

\[
\begin{align*}
(q^-) \quad q^- q^+ \\
dzengel + neck \\
\end{align*}
\]

\[
\begin{align*}
(q^-) \quad q^- q^+ \\
koncert + neck \\
\end{align*}
\]

\[
\begin{align*}
(q^+) \quad ( \quad ) q^+ \\
dzengel + neck \\
\end{align*}
\]

\[
\begin{align*}
(q^+) \quad ( \quad ) q^+ \\
koncert + neck \\
\end{align*}
\]

Explanations. Note that this type of words only occurs when there is an or an in the last vowel.

The -back [on the neutral vowels and one without the specification] which will behave according to expectations. For these words, for some speakers, one containing the exceptional morphological specification.

In this case, I choose either a front or back vowel suffix. I propose that there are two lexical.

Next, I want to consider vowelless suffixes, such as koncert and dzengel (concrete and jungle). It is.

\[
\begin{align*}
(q^+) \quad q^- q^+ \\
\text{redex + neck} \\
\end{align*}
\]

\[
\begin{align*}
(q^-) \quad q^- q^+ \\
koncert + neck \\
\end{align*}
\]

I believe that loan words sometimes follow different rules.

Maybe something just went a little off-course in the assimilation process. Kotta and Kregen (1986) also.

say that it is specified in the underlying representation before the phonological processes began. There is no.

vowel suffix. I assume that there is a floating [-back] feature on the e in the morphology as [-back].
In addition to the front vowel suffix (anaphyl, and asphyx) and anaphyl, and asphyx, it is now evident that if a back vowel suffix is always

acceptable, it may be acceptable (anaphyl, and asphyx) and anaphyl, and asphyx, but if in place of an e there is a back vowel

operated upon a back vowel suffix is never acceptable. But if in place of an e there is a back vowel

vowel, if the word has a back vowel then any neutral vowel and then an e in the word

appear.

[Low e] starts to show its strength, as it leans towards being a homorganic front vowel instead of a neutral

are many words that are weakly in the suffix choice. This is a case where the

Although there is never a word root structure of this form that will only govern a back vowel suffix, there

vowels that have no roundness specification.

and now we apply the three, backness spreads from the right-most specified vowel in the word root to

and now we apply rule 2, which allows us to put in the default features of [back] in the word root, giving us:

Now we apply rule 2, which allows us to put in the default features of [back] in the word root, giving us:

So, after applying this rule, we are left with still no backness specification in the suffix.

Backness cannot spread over more than two vowel positions.
The reason for having two generalizations in regards to spreading is that Hungarian präterites to spread round vowels only (with the exception of e). However, since that spreading feature is only strong enough to spread two vowel places, sometimes it doesn't successfully reach the suffix vowel. In this case, the neutral vowels take their default [-back] specification and are then capable of spreading.

1. Backness spreads from the right-most specified vowel in the word root to vowels that have no backness spread.
2. Any underspecified root vowels will default to [-back].
3. Backness cannot spread over more than two vowel positions.
4. All vowels not specified for roundness default to -round.
5. e becomes -round.

Roundness specification:

1. Backness spreads from the right-most specified vowel in the word root to vowels that have no backness or roundness specification.
2. Round vowels have no backness specification.
3. Suffixes for which these are an alternating vowel have no backness or roundness specification.

Underlying Representation:

\[(q^+) q + q-\]

predict the correct outcome. Therefore, this would look like this:

To account for the odd-ity, I will also use the floating backness feature as a lexical irregularity to

\[q^+\] ( ) q + ( ) q+

meaning:

Two lexical entries:

I suggest making a lexical entry responsible for this variation, so that the words which accept both
Propositional World

No vowel inversion between the right edge of a specified [back] and the right edge of the

I. ALLOC-RK

My analysis uses the following five constraints:

Constraints

We show that harmony processes to occur naturally, which is the desired effect.

Counterparts, which is part of the reason they are neutral. By leaving them unspecified at the input level

[back], [low-], [round-] [high-] [round+] : e 
[back], [low+], [round-] [high-] [round+] : e 
[low-] [high+] [round-] [back] : i 
[low-] [high+] [round-] [back] : i 
[low-] [high+] [round+] [back] : o 
[low-] [high+] [round+] [back] : o (or [low+], [round+] [round-] [back])

First, a key to understanding the shortening of the underspecified vowels in the OT model:

Language such as Hungarian...

Hungarian and Vagó (1998) that underspecification seems crucial to an OT analysis in a vowel harmony model that underspecification as to be underspecified as to backness at the input level, and I agree with all neutral vowels ([back]+ [round-] [back]) to be underspecified as to backness at the input level, and I agree with Hungarian vowel harmony fits fairly well into the framework of Optimality Theory. My analysis requires VIT, Optimality Theory

h. Optimality Theory

Round feature, which is for harmonizing, and becomes its underspecification to round.

backness, even though they aren't round. After this, all vowels are fully specified and the e loss is
The only one the optimal choice violate.

Appears to support a more towards raising the * [EMK] constraint lower than the rest, since it is.

This next one is a simple case of a mixed root containing a back vowel and then a neutral vowel. It

clear whether any of the constraints outrank one another. We will have to see a few more examples.

At this point, since the correct outcome, gyrmulcseban does not violate any of the constraints, it is not.

First, a straightforward example where all the vowels in the word agree in backness.

Before.

Presented in roughly the same patterns to see how this analysis handles the same problems we've seen.

Following are many of the same examples from the generalize phonology account. The words are.

Don't have vowels in adjacent syllables have different backness specifications.

5. * [gback] [gback]

Corresponding input and output affix vowels must not have different specifications.

4. Faithfx

(gback) is okay, (gback) is not okay.

Corresponding input and output root vowels may not have different specifications.

3. Faithf

No vowel may be outside of the inventory of Hungarian vowels.

2. Faithf

Inventory
governs the same outline (back vowel suffix) only the label is for 'have' is below.

The reason I do not also choose to make a neutral is for the times when it behaves as a regular neutral.

The constraint that the optimal output violates, so

In the last two examples, *[obk [ [obk] [bk] [bk] [bk]] has been the only constraint that the optimal output violated.

volv, but by underspecifying the front neutral, vowels they don't spread.

underspecifying neutral vowels is handy, because this word has two front vowels and only one back vowel.

The next example is a loan word with only one harmonic vowel. This is another good example of why
will then cause the correct surface representation by means of the constraints. It would be nice to take
the lexicon will always have two entries, one of which will have a floating [+back] vowel feature which
a morphological explanation. Apparently, if the penultimate vowel is neutral and the last vowel is a neutral vowel, the analysis makes oxygen and no vowel: Since analis and makes are actually vocalizations, these must be
follow below neutral vowels. NEUT will not work if there are additional floating vowel markers.

<table>
<thead>
<tr>
<th>*</th>
<th>*</th>
<th>&lt;i&gt;NEUT&lt;/i&gt;</th>
</tr>
</thead>
</table>

Following constraints be added:

say that back vowel suffixes are the exception and are due to irregularity in the lexicon. I propose the
though some (but not all) also govern back vowel suffixes, I am prepared to make that the norm, and
since all words with two neutral vowels in the last two vowel positions govern front vowel suffixes, even
To account for cases in which two neutral vowels cause a front vowel suffix:

<table>
<thead>
<tr>
<th>*</th>
<th>*</th>
<th>&lt;i&gt;NEUT&lt;/i&gt;</th>
</tr>
</thead>
</table>

I will also adopt the floating feature to account for these words, as seen here with <i>vik</i> and <i>vik</i>
suffix. I will also adopt the floating feature to account for the “odd finals” the group of monosyllabic
Now I will give a few more example tables to demonstrate the constraints and two cases where the

\[ \text{NEUT} \ll \text{FAITH} \ll \text{FAITH}^{\text{flex}} \ll \text{ALIGN-BK} \ll \text{gback} \ll \text{gback} \ll \text{gback} \ll \text{gback} \]

My final consistent ranking is:

\[ \text{NEUT} \ll \text{FAITH} \ll \text{FAITH}^{\text{flex}} \ll \text{ALIGN-BK} \ll \text{gback} \ll \text{gback} \ll \text{gback} \ll \text{gback} \]

is being controlled in the lexicon.

Environmental factors help determine which vending suffix is chosen, we have further evidence that it

single optimal output. I hold that the vending is morphologically driven. Also, since we know that

this out of the morphology and put it into the constraints, but because the nature of OT is to choose the
<table>
<thead>
<tr>
<th>Back</th>
<th>Front</th>
<th>Back</th>
<th>Front</th>
</tr>
</thead>
<tbody>
<tr>
<td>27%</td>
<td>6</td>
<td>59%</td>
<td>1</td>
</tr>
<tr>
<td>66%</td>
<td>1</td>
<td>81%</td>
<td>1</td>
</tr>
</tbody>
</table>

Received Back Suffix

<table>
<thead>
<tr>
<th>88%</th>
</tr>
</thead>
</table>

Received Back Suffix

<table>
<thead>
<tr>
<th>94%</th>
</tr>
</thead>
</table>

Received Front Suffix

Here I will present the data from the surveys. More detailed data is available in Appendix B.

**VII. Data**
controls.

When the neutral vowel was e or e/e we got a 94% success rate, which rivals the success rate of the
when the neutral vowel in this pattern was 0 or the correct suffix only occurred 77% of the time, but
in a front vowel, and 65% of the survey words of this type were given a front vowel in the suffix. Also,
suffix by the subjects. The chair also predicts that 100% of the neutral vowel e combinations will result
only on average of 23% of the new hungarian words with this vowel pattern were given a back vowel.
The chair predicts that 100% of the back vowel e combinations will result in a back vowel suffix, but

<table>
<thead>
<tr>
<th>November-nex</th>
<th>e</th>
<th>neutral</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxigen-nex</td>
<td>e</td>
<td>neutral</td>
</tr>
<tr>
<td>Mailing-nex</td>
<td>e</td>
<td>neutral</td>
</tr>
<tr>
<td>Salzis-nex</td>
<td>0</td>
<td>neutral</td>
</tr>
<tr>
<td>Ravex-nex</td>
<td>0</td>
<td>back</td>
</tr>
<tr>
<td>Dzanger-nex</td>
<td>0</td>
<td>back</td>
</tr>
<tr>
<td>Konkre-nex</td>
<td>0</td>
<td>back</td>
</tr>
<tr>
<td>Patient-nex</td>
<td>0</td>
<td>back</td>
</tr>
<tr>
<td>(front vowel)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(neutral)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vowel chosen</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selecting suffixes</td>
<td>0</td>
<td>back vowel chosen</td>
</tr>
<tr>
<td>(neutral vowels completely)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Final Vowel</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Reference:

The existing words in hungarian and the patterns in which they govern suffixes, repeated here for ease of
To compare the results I expected and the actual results, I will again be referring to the chart of
expected.

The same ways, and that even the so-called controlled continuities did not prove as straightforward as
choosing the back vowel suffix, showing both that subjects do not always respond to the same words in
the subjects responding (celterek), but even the other two celterek came back with some subjects
In all of the controlled questions, only one survey every came back with one hundred percent of

<table>
<thead>
<tr>
<th>Patterns:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>%85</td>
<td>e</td>
</tr>
<tr>
<td>%84</td>
<td>e</td>
</tr>
<tr>
<td>%80</td>
<td>0</td>
</tr>
<tr>
<td>%77</td>
<td>0</td>
</tr>
<tr>
<td>Received front suffix</td>
<td></td>
</tr>
</tbody>
</table>
Although it may have begun as a completely phonological process, it certainly is not anymore.

phonological process and more morphological as the language changes and acquires more loan words.

is the case in Hungarian. My initial analysis of Hungarian vowel harmony is that it is becoming less of a
words enter a language, the vowel harmony patterns become less reliable, and I am convinced that this
dependent on phonological systems. Harrson and Kain (1999) state that as more derivational loan
which is a lexical distinction. And third, my own data suggest that suffocation processes are not only
loan words suffocation process may be affected by stress, which is different behavior than native words,
which nurtures to please morphological preference. Second are Kontra and Kungnur (1986) findings that
that environment can affect the suffix choice when the word is derivational. Possibly velarizations even
assertion that Hungarian vowel harmony is not a phonologically robust system. First there is the finding
the phonological explanations are simply not complete enough. There is a lack of evidence to support the
know that there is vast understanding among linguists who study Hungarian vowel harmony, and that
myself needing to rely on the morphology to explain the complex Hungarian data. After researching, I

Throughout the development of my generative grammar and optimally constraint I have found

VIII. Conclusion

predicted.

percentage of words belonging in each category, as that is assigned by the lexicon and could not be
pattern, it is not possible to compare the survey results to the chart since we do not know what
constraints. Because the rest of the chart has more than one type of ending possibility for each vowel
vowel followed by less than average of 84% front vowel suffix occurrence, giving merit to my OT
without specific morphological changes, words of this type govern front vowel suffixes. Also, a neutral
strengthens my position in the OT analysis that the exception is the back vowel allophones, and that
averaged 78% front vowel suffix, indicating a preference for the front vowel option. This possibly

The pattern of neutral vowel followed by /j/ has only a velarizing option. The survey's results
<table>
<thead>
<tr>
<th>goszolék</th>
<th>rzehnánel</th>
<th>post</th>
<th>dormerk</th>
</tr>
</thead>
<tbody>
<tr>
<td>rukömecél</td>
<td>nyhumblád</td>
<td>dairz</td>
<td>rígyil</td>
</tr>
<tr>
<td>dzerlág</td>
<td>dambyzépdé</td>
<td>dambyzépdé</td>
<td>dambyzépdé</td>
</tr>
<tr>
<td>renginýmad</td>
<td>rangelínak</td>
<td>renchi</td>
<td>réngi</td>
</tr>
<tr>
<td>goszolék</td>
<td>hopzéstád</td>
<td>hopzéstád</td>
<td>hopzéstád</td>
</tr>
<tr>
<td>múnbíné</td>
<td>múnbínak</td>
<td>múnbínak</td>
<td>múnbínak</td>
</tr>
<tr>
<td>cérzébdél</td>
<td>végýpelé</td>
<td>végýpelé</td>
<td>végýpelé</td>
</tr>
<tr>
<td>patronk</td>
<td>patronk</td>
<td>patronk</td>
<td>patronk</td>
</tr>
<tr>
<td>cérzébdél</td>
<td>szalmé</td>
<td>szalmé</td>
<td>szalmé</td>
</tr>
<tr>
<td>akámbébdél</td>
<td>akámbébdél</td>
<td>akámbébdél</td>
<td>akámbébdél</td>
</tr>
<tr>
<td>rígyiné</td>
<td>rígyiné</td>
<td>rígyiné</td>
<td>rígyiné</td>
</tr>
<tr>
<td>cimbébdél</td>
<td>cimbébdél</td>
<td>cimbébdél</td>
<td>cimbébdél</td>
</tr>
<tr>
<td>rémadébdél</td>
<td>mokasaénylé</td>
<td>mokasaénylé</td>
<td>mokasaénylé</td>
</tr>
<tr>
<td>goszolék</td>
<td>goszolék</td>
<td>goszolék</td>
<td>goszolék</td>
</tr>
</tbody>
</table>

This is a linguistic experiment. The following list of words are new words in Hungarian, the meanings of which are not important. It is your job to circle the best-sounding suffix choice for each word. Please do not worry about what is proper, just choose the form that sounds best to you.

Example:

<table>
<thead>
<tr>
<th>Age:</th>
<th>Name:</th>
<th>Age:</th>
<th>Name:</th>
</tr>
</thead>
</table>

Appendix A
<table>
<thead>
<tr>
<th>Back Harmonic E</th>
<th>Received back suffix</th>
</tr>
</thead>
<tbody>
<tr>
<td>13%</td>
<td>liesbey</td>
</tr>
<tr>
<td>32%</td>
<td>podcaster</td>
</tr>
<tr>
<td>20%</td>
<td>zukerm</td>
</tr>
<tr>
<td>4%</td>
<td>volcano</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Back Harmonic E</th>
<th>Received back suffix</th>
</tr>
</thead>
<tbody>
<tr>
<td>38%</td>
<td>csnjowers</td>
</tr>
<tr>
<td>49%</td>
<td>bohnezie</td>
</tr>
<tr>
<td>43%</td>
<td>migwen</td>
</tr>
<tr>
<td>76%</td>
<td>pile</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Back Harmonic 1</th>
<th>Received back suffix</th>
</tr>
</thead>
<tbody>
<tr>
<td>65%</td>
<td>boulib</td>
</tr>
<tr>
<td>72%</td>
<td>sanymani</td>
</tr>
<tr>
<td>71%</td>
<td>dahl</td>
</tr>
<tr>
<td>86%</td>
<td>mhami</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Back Harmonic 1</th>
<th>Received back suffix</th>
</tr>
</thead>
<tbody>
<tr>
<td>79%</td>
<td>refali</td>
</tr>
<tr>
<td>98%</td>
<td>goszol</td>
</tr>
<tr>
<td>76%</td>
<td>gahir</td>
</tr>
<tr>
<td>82%</td>
<td>sziimi</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Back Roots</th>
<th>Received back suffix</th>
</tr>
</thead>
<tbody>
<tr>
<td>93%</td>
<td>moksgay</td>
</tr>
<tr>
<td>58%</td>
<td>hogkosz</td>
</tr>
<tr>
<td>58%</td>
<td>nyumie</td>
</tr>
<tr>
<td>50%</td>
<td>bozczest</td>
</tr>
<tr>
<td>80%</td>
<td>loker</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Front Roots</th>
<th>Received front suffix</th>
</tr>
</thead>
<tbody>
<tr>
<td>97%</td>
<td>cilwu</td>
</tr>
<tr>
<td>91%</td>
<td>hikoke</td>
</tr>
<tr>
<td>56%</td>
<td>szosdwm</td>
</tr>
<tr>
<td>56%</td>
<td>dilur</td>
</tr>
<tr>
<td>4%</td>
<td>bibik</td>
</tr>
<tr>
<td>Neural Vowel</td>
<td>Received Front Suffix</td>
</tr>
<tr>
<td>--------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>Received</td>
<td></td>
</tr>
<tr>
<td>E</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Received</th>
<th>Front Suffix</th>
</tr>
</thead>
<tbody>
<tr>
<td>Received</td>
<td>93%</td>
</tr>
<tr>
<td>E</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Received</th>
<th>Front Suffix</th>
</tr>
</thead>
<tbody>
<tr>
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Linguistic Inquiry; 1978, 9, 1, winter, 116-125.


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Optimality Theory: An Overview. Ed. Diana Archangeli and D. Terence Langendoen. Malden,